

# 2016 AGU Fall Meeting

# CSD Talk/Poster Events

Prepared by: R. Knott, 28 Oct 2016

## Monday, December 12 Talks:

<b>Lamb:</b> Talk Dec. 12 A11Q-06 Moscone West - 3010 9:15 am- 9:30 am
"HD-SP2 Measurements of Black Carbon Containing Aerosols in South Korea during KORUS-AQ"
K. Lamb; A. Perring; J. Ahn; J. Schwarz

<b>Gao:</b> Invited Talk Dec. 12 A12E-01 Moscone West - 3012 10:20 am- 10:35 am
"Overview of the NASA Pacific Oxidants, Sulfur, Ice, Dehydration, and cONvection (POSDON) Experiment (Invited)"
R. Gao; E. Jensen; K. Rosenlof; E. Atlas; M. Avery; T. Bui; P. Colarco; G. Diskin; J. Elkins; E. Hintscha; D. Hurst; P. Lawson; S. Liu; F. Moore; L. Pfister; A. Rollins; S. Schauffer; M. Schoberl; T. Thornberry; R. Ueyama; J. Ulanowski; S. Woods

<b>Yu:</b> Talk Dec. 12 A12E-07 Moscone West - 3012 11:50 am- 12:05 pm
"Asian Summer Monsoon Pollutes the Northern Hemispheric Stratosphere"
P. Yu; R. Gao; K. Rosenlof; H. Telg; S. Liu; B. Zhixuan; J. Bian

<b>Yamaguchi:</b> Talk Dec. 12 A12A-07 Moscone West - 3008 11:50 am- 12:05 pm
"Framework for Improvement by Vertical Enhancement: A simple approach to improve low and high clouds in large-scale models"
T. Yamaguchi; G. Feingold; V. Larson

<b>Rollins:</b> Talk Dec. 12 A12E-08 Moscone West - 3012 12:05 pm- 12:20 pm
"In-Situ Observations Define the Role of Sulfur Dioxide in Stratospheric Aerosol Formation"
A. Rollins; T. Thornberry, L. Watts; P. Yu; K. Rosenlof; M. Mills; E. Baumann; F. Giorgetta; T. Bui; M. Hoepfner; K. Walker; C. Boone; P. Bernath; P. Colarco; P. Newman; D. Fahey; R. Gao

<b>Parrish:</b> Talk Dec. 12 A13J-07 Moscone West - 3010 15:10 pm- 15:25 pm
"Observationally based estimates of U.S. background ozone contributions to NAAQS exceedances in California urban areas"
D. Parrish; L. Young; M. Newman; K. Aikin; T. Ryerson

## Monday, December 12 Posters:

<b>Glassmeier:</b> Poster Dec. 12 A11J-0147 Moscone South - Poster Hall 8am- 12:20 pm
"Constraining Aerosol-Cloud-Precipitation Interactions of Orographic Mixed-Phase Clouds with Trajectory Budgets"

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F. Glassmeier; U. Lohmann

**Thompson: Poster Dec. 12 A11L-0171 Moscone South - Poster Hall 8 am - 12:20 pm**

“Global Airborne Observations of Nitrogen Oxides and Ozone from the Atmospheric Tomography Mission”

C. Thompson; J. Peischl; T. Ryerson

**McKeen: Poster Dec. 12 A11M-0181 Moscone South- Poster Hall 8 am – 12:20 pm**

“Using Potential Vorticity to Represent the Effect of Stratosphere-Troposphere Exchange on Vertical Ozone Distributions in the Front Range During the FRAPPE 2014 Field Campaign.”

S. McKeen; Y. Cui; R. Ahmadov; W. Angevine; G. Pfister; B. Peirce; J. Xing; R. Mathur

**Langford: Poster Dec. 12 A11M-0183 Moscone South- Poster Hall 8 am – 12:20 pm**

“Vertical Distributions of Ozone above the San Joaquin Valley Measured by the NOAA TOPAZ lidar during the California Baseline Ozone Transport Study”

A. Langford; R. Alvarez; G. Kirgis; C. Senf; A. Weickmann

**Liu: Poster Dec. 12 A13G-0360 Moscone South- Poster Hall 1:40 pm- 6 pm**

“Probing the Asian Tropopause Aerosol Layer during Summer Monsoon Using in situ Measurements”

S. Liu; P. Yu; H. Telg; B. Zhixuan; K. Rosenlof; R. Gao

**Thornberry: Poster Dec. 12 A13G-0370 Moscone South - Poster Hall 1:40 pm- 6 pm**

“The Net Efficiency of Dehydration in the TTL Inferred from In Situ Measurements and Back Trajectory Analysis”

T. Thornberry; A. Rollins; L. Pfister; R. Ueyama; S. Davis; T. Bui

**Perring: Poster Dec. 12 A13H-0389 Moscone South - Poster Hall 1:40 pm- 6 pm**

“Vertical distributions of fluorescent aerosol over the Eastern U.S.”

A. Perring; E. Robinson; J. Schwarz; R. Gao

**Fibiger: Poster Dec. 12 B13F-0683 Moscone South - Poster Hall 1:40 pm- 6 pm**

“Untangling the Causes of Variation in CINO<sub>2</sub> Yield from the WINTER Campaign”

D. Fibiger; F. Lopez-Hilfiker; E. McDuffie; W. Dube; B. Lee; C. Ebbin; T. Sparks; P. Wooldridge; A. Weinheimer; D. Montzka; J. Schroder; P. Campuzano-Jost; H. Guo; A. Sullivan; J. Dibb; R. Weber; J. Jimenez; R. Cohen; J. Thornton; S. Brown

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## Tuesday, December 13 Talks:

<b>Glassmeier: Talk Dec. 13 A21A-06 Moscone West - 3001 9:15 am- 9:30 am</b>
"A Model-Based Investigation of Charge-Generation According to the Relative Diffusional Growth Rate Theory"
F. Glassmeier; L. Arnold; U. Lohmann; R. Diericher; M. Paukert

<b>Peischl: Talk Dec. 13 A22G-07 Moscone West - 3008 11:50 am- 12:05pm</b>
"Methane and carbon dioxide emissions from selected U.S. coal production regions and coal-fired power plants"
J. Peischl; T. Ryerson; M. Trainer

<b>Eilerman: Talk Dec. 13 A23P-03 Moscone West - 3008 2:10 pm- 2:25 pm</b>
"Using mobile laboratory and aircraft measurements to characterize feedlot emissions and their contribution to atmospheric methane over the Denver-Julesburg Basin"
S. Eilerman; J. Peischl; A. Neuman; K. Aikin; M. Trainer; T. Ryerson

<b>Yuan: Talk Dec. 13 A23P-04 Moscone West - 3008 2:25 pm – 2:40 pm</b>
"Emissions of Volatile Organic Compounds (VOCs) from Animal Husbandry: Chemical Compositions, Separation of Sources and Animal Types"
B. Yuan; M. Coggon; A. Koss; C. Warneke; S. Eilerman; J. Neuman; J. Peischl; K. Aikin; T. Ryerson; J. de Gouw

<b>McDonald: Invited Talk Dec. 13 A24F-03 Moscone West - 3008 4:30 pm- 4:45 pm</b>
"Quantifying Volatile Organic Compound Emissions from Solvents and their Impacts on Urban Air Quality" (Invited)
B. McDonald; J. de Gouw; J. Gilman; C. Cappa; G. Frost; A. Goldstein; S. Janthar; S. Kim; S. McKeen; J. Roberts; M. Trainer

## Tuesday, December 13 Posters:

<b>Frost: Poster Dec. 13 A21C-0038 Moscone South - Poster Hall 8am-12:20 pm</b>
"Analysis of Long-term Observations of NO <sub>x</sub> and CO in Megacities and Application to Constraining Emissions Inventories"
G. Frost; B. Hassler; B. McDonald; A. Borbon; D. Carlsaw; K. Civerolo; C. Granier; P. Monks; S. Monks; D. Parrish; I. Pollack; K. Rosenlof; T. Ryerson; E. von Schneidemesser; M. Trainer

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<b>Roberts: Poster Dec. 13 A23D-0600 Moscone South - Poster Hall 1:40 pm- 6 pm</b>
“The FIREX 2016 Missoula Fire Lab Study”
J. Roberts; R. Yokelson; C. Warneke; A. Middlebrook; J. Schwarz;

<b>Stockwell: Poster Dec. 13 B23D-0616 Moscone South - Poster Hall 1:40 pm- 6 pm</b>
“Development and Deployment of a Particle-into-Liquid sampling - Electrospray Ionization Mass Spectrometer (PiLs-ESI/MS) for Characterization of Water-Soluble Biomass Burning Aerosols”
C. Stockwell; B. Wiltkowski; R. Talukdar; A. Middlebrook; J. Roberts

## Wednesday, December 14 Talks:

<b>Papanastasiou: Talk Dec. 14 A31L-08 Moscone West- 3008 9:45 am- 10 am</b>
“The atmospheric degradation of methyl isocyanate ( $\text{CH}_3\text{NCO}$ ), a toxic substance”
D. Papanastasiou; F. Bernard; J. Burkholder

<b>Portmann: Talk Dec. 14 GC34B-08 Moscone West - 3001 5:45 pm – 6 pm</b>
“The Earth's Energy Budget Across CMIP5 Model”
R. Portmann; E. Larson

## Wednesday, December 14 Posters:

<b>Angevine: Poster Dec. 14 A1N31A-1746 Moscone South - Poster Hall 8am-12:20 pm</b>
“Mid-tropospheric Spectral Length-scale Analysis of Many Constituents from Aircraft, Satellite and Model Results During the 2013 SENEX Field Study”
W. Angevine; S. McKeen; R. Ahmadov; G. Frost; S. Kim; Y. Cui; B. McDonald; M. Trainer; J. Holloway; T. Ryerson; J. Peischl; A. Gambarcota; C. Barnet; N. Smith; R. Pierce

<b>Granier: Poster Dec. 14 A31B-0027 Moscone South- Poster Hall 8am- 12:20pm</b>
“Evaluation of Emissions for Forecasting and Reanalyses of Air Quality in Asia”
C. Granier; E. Doumbia; L. Granier; K. Sindelarova; G. Frost; I. Bourar; C. Liousse; S. Dararas; T. Stavrakou

<b>Burkholder: Poster Dec. 14 A33E-0265 Moscone South - Poster Hall 1:40 pm- 6pm</b>
“Laboratory Study of the OH + Permethylsiloxane ( $\text{L}_2$ , $\text{L}_3$ , $\text{D}_3$ , and $\text{D}_4$ ) Reaction Rate Coefficients Between 240 and 370”
J. Burkholder; F. Bernard; V. Papadimitriou

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**Bernard: Poster Dec. 14 A33E-0268 Moscone South - Poster Hall 1:40 pm – 6 pm**

“Radiative Efficiencies and Atmospheric Loss Processes of Atmospherically Persistent Perfluoroamines:  $N(C_xF_{2x+1})_3$ ,  $x = 2-5$ ”

F. Bernard; V. Papadimitriou; D. Papanastasiou; J. Burkholder

**Womack: Poster Dec. 14 A33E-0274 Moscone South - Poster Hall 1:40 pm – 6 pm**

“Characterizing Interferences in an NOy Thermal Dissociation Inlet”

C. Womack; P. Veres; C. Brock; J. Neuman; S. Eilerman; K. Zarzana; W. Dube; R. Wild; P. Wooldridge; R. Cohen; S. Brown

Thursday, December 15 Talks:

**Murphy: Talk Dec. 15 A41J-03 Moscone West - 3008 8:35 am – 8:37 am**

“A Large Radiative Forcing by Stratospheric Sulfate and Organic Aerosol”

D. Murphy; P. Yu; K. Froyd; R. Gao; R. Portmann; B. Toon; K. Rosenlof

**Cui: Talk Dec. 15 A42D-02 Moscone West - 3004 10:35 am- 10:50 am**

“Top-down estimates of methane and nitrogen oxide emissions from shale gas production regions using aircraft measurements and a mesoscale Bayesian inversion system together with a flux ratio inversion technique”

Y. Cui; J. Brioude; W. Angevine; S. McKeen; D. Henze; N. Bouscerez; Z. Liu; B. McDonald; J. Peischl; T. Ryerson; G. Frost; M. Trainer

**Schwarz: Talk Dec. 15 GC42C-03 Moscone West – 3001 10:50 am- 11:05 am**

“FIREX: Aerosol Science Priorities for the 2018 WP-3D Campaign”

J. Schwarz; J. Roberts; C. Warneke; R. Yokelson

**Butler: Talk Dec. 15 A42B-03 Moscone West - 3008 10:55 am- 11:07 am**

“Diagnosing ozone recovery using the  $O_3-N_2O$  relationship”

A. Butler; R. Gao; A. Maycock; R. Portmann; T. Thornberry; K. Rosenlof; D. Fahey

**McDuffie: Talk Dec. 15 A42A-03 Moscone West - 3012 10:50 am – 11:05 am**

“The Wintertime Fate of  $N_2O_5$ : Observations and Box Model Analysis for the 2015 WINTER Aircraft Campaign”

E. McDuffie; D. Fibiger; W. Dube; F. Lopez-Hilfiker; J. Thornton; V. Shah; L. Jaegle; H. Guo; R. Weber; P. Campuzano-Jost; J. Schroder; J. Jimenez; S. Brown

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<b>Feingold: Invited Talk Dec. 15 A44E-02 Moscone West, 3010 4:15 pm- 4:30 pm</b>
"Narrowing the Gap in Quantification of Aerosol-Cloud Radiative Effects" (Invited)
G. Feingold; A. McComiskey; T. Yamaguchi; J. Kazil; J. Johnson; K. Carslaw

<b>Ervens: Talk Dec. 15 A44D-04 Moscone West, 3006 4:45 pm- 5 pm</b>
"Parameterizations of aqSOA formation: Weaknesses and steps to improvements"
B. Ervens;

## Thursday, December 15 Posters:

<b>Davis: Poster Dec. 15 NG41B-1730 Moscone South - Poster Hall 8 am- 12:20 pm</b>
"Stratospheric water vapor and ozone evaluation in reanalyses as part of the SPARC Reanalysis Intercomparison Project (S-RIP)"
S. Davis

<b>Rosenlof: Poster Dec. 15 A43C-0227 Moscone South - Poster Hall 1:40 pm - 6 pm</b>
"Lower stratospheric observations from aircraft and satellite during the 2015/2016 El Nino"
K. Rosenlof; M. Avery; S. Davis; R. Gao; T. Thornberry;

<b>Ray: Poster Dec. 15 A43A-0184 Moscone South - Poster Hall 1:40 pm- 6 pm</b>
"SF <sub>6</sub> Lifetime Adjustment Based on Mesospheric Loss Measured in the Stratospheric Polar Vortex"
E. Ray; F. Moore; J. Elkins; K. Rosenlof; J. Laube; T. Rockmann; D. Marsh;

<b>Kazil: Poster Dec. 15 A43B-0204 Moscone South - Poster Hall 1:40 pm- 6 pm</b>
"Mesoscale Organization and the Stratocumulus Cloud Radiative Effect in a Changing Climate"
J. Kazil; G. Feingold; T. Yamaguchi

## Friday, December 16 Talks:

<b>Feingold: Invited Talk Dec 16 A51D-0094 Moscone West, 3006 8 am – 8:15 am</b>
"Aerosol and cloud microphysics in cloud systems" (Invited)
G. Feingold; F. Glassmeier

<b>Katich: Talk Dec 16 A51N-02 Moscone West, 3004 8:15 am – 8:30 am</b>
"First Comparison of Remote Vertical Profiles of Refractory Black Carbon between the Atlantic and Pacific Basins on Global Scales"

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J. Katich; J. Schwarz

**Klinger: Talk Dec 18 A52C-07 Moscone West, 3006 11:50 am – 12:05 pm**

“Effects of 1D and 3D Thermal Radiation on Cloud Dynamics and Microphysics”

C. Klinger; B. Mayer; F. Jakub; T. Zinner

## Friday December 16 Posters:

**Kim: Poster Dec. 16 A51D-0094 Moscone South- Poster Hall 8 am- 12:20 pm**

“Assessing Anthropogenic Emissions of Volatile Organic Compounds using Satellite Retrievals of Formaldehyde”

S. Kim; J. Gilman; J. Tsai; C. Warneke; S. McKeen; B. McDonald; V. Natraj; G. Frost; J. de Gouw; J. Stutz; M. Trainer

**Adler: Poster Dec. 16 A51B-0025 Moscone South- Poster Hall 8 am- 12:20 pm**

“A Design of a Novel Airborne Aerosol Spectrometer for Remote Sensing Validation”

G. Adler; C. Brock; W. Dube; F. Erdesz; T. Gordon; D. Law; K. Manfred; B. Mason; R. McLaughlin; M. Richardson; N. Wagner; R. Washenfelder; D. Murphy

**Kupc: Poster Dec. 16 A53C-0309 Moscone South- Poster Hall 1:40 pm- 6 pm**

“Aerosol microphysical properties of the remote troposphere. Preliminary results from the first ATom airborne research experiment.”

A. Kupc; C. Williamson; C. Brock; K. Froyd, D. Murphy; M. Richardson; P. Campuzano-Jost; R. Commane; B. Daube; M. Dollner; J. Jimenez; B. Nault; J. Peischl; T. Ryerson; J. Schroder; C. Thompson; B. Weinzierl' S. Wofsy

**Brock: Poster Dec. 16 A53C-0310 Moscone South- Poster Hall 1:40 pm- 6 pm**

“Global Particle Size Distributions: Measurements during the Atmospheric Tomography (ATom) Project”

C. Brock; C. Williamson; A. Kupc; K. Froyd; M. Richardson; B. Weinzierl; M. Dollner; H. Schuh; F. Erdesz

\*\* RED indicates a time conflict. \*\*

\*\* BLUE indicates an invited talk. \*\*